Electricity on the Farm

A MONTHLY MAGAZINE FOR THE UP-TO-DATE RURAL FAMILY

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FEBRUARY
1934

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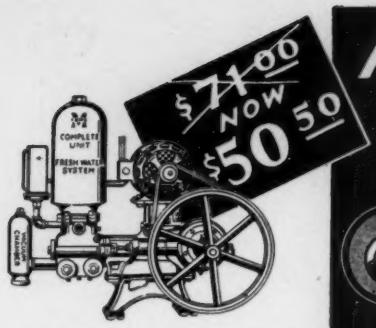

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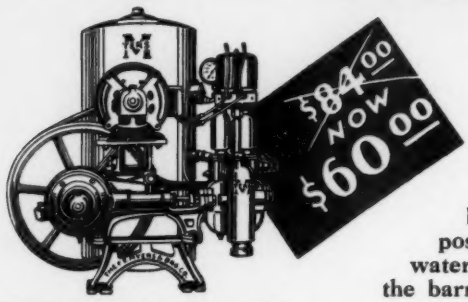

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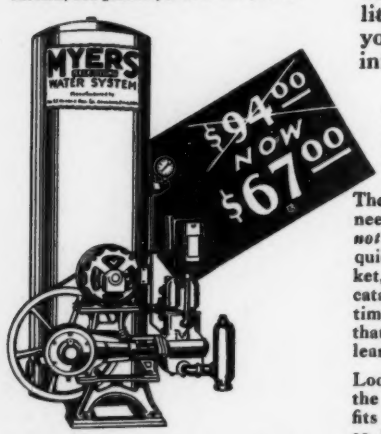

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February, 1934
Vol. 7 No. 2

Electricity on the Farm

IN THIS ISSUE

The Good Seed

BY E. R. MEACHAM

Good seed is the best assurance of harvesting a worth while crop. In recent years, great strides have been made in the methods employed in drying and grading processes. The author presents a very interesting article on this subject on page 4 and tells of the part which electricity is taking in making possible the production of better seed.

Keeping the Milk Pail Clean

BY G. L. MUNROE

The milk pail is said to be often the source of high bacteria count in milk. But, sterilization of pails and other equipment will reduce the count remarkably. A sterilization unit such as described and illustrated by the author on page 8 is efficient and economical to operate, besides eliminating the fire hazard incidental to open flame type heaters about the dairy buildings.

Profit From Power on a Georgia Farm

BY PHILIP WARREN

Dr. Haygood, Supt. of the Georgia State Tuberculosis Sanitorium, states that the farmer desirous of making a profit cannot afford to be without electric equipment. And by putting his convictions into practice, he has turned the sanitorium farm which was a liability (in 1930) into a paying proposition. On page 9 the author outlines Dr. Haygood's procedure in accomplishing such gratifying results with the aid of electricity.

Celery Gets an Early Start

BY LAWRENCE E. GOBLE

It is said that the "early bird gets the worm," and the same statement applies in profiting by advance crops of food products. The author, on page 11, describes the application of electricity in producing an early celery crop, the results of which were sufficiently favorable to justify continuation this year on a much more extensive scale.

Regular Monthly Features

On the Air, page 13, Electrical Housekeeping, page 14; Questions and Answers, page 16; What's New, page 17.

EDITORIAL

A SHORTER day for industrial workers in cities is one of the aims of the N. R. A. Higher pay, too, is included in the program.

A shorter day for agriculture is considered impracticable, apparently, for no attention is being given to it by the A. A. A. Reduced acreage in certain staples may reduce the field work proportionately, but chores around the farm will keep the work day to its usual length.

Significant indeed is the Administrations' attitude toward farm electrification. The intention of the federal Power Authorities to make available electric service to farms within the territory in which it is interested is a conspicuous recognition of the essential place of this great labor saver in farming.

Maybe the agricultural day cannot be shortened by codes; but it can be shortened, and work made lighter, by the judicious use of electric power.

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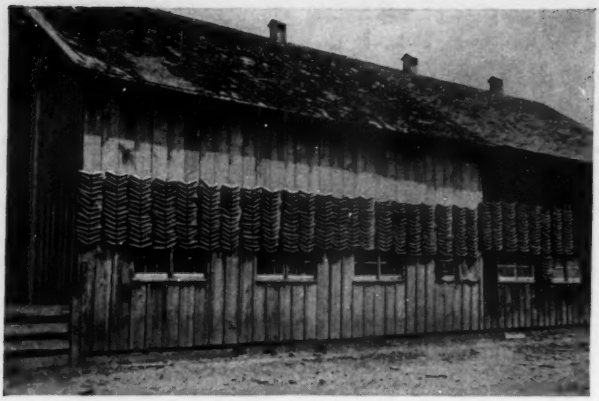


Tests show that the side of the barn is the very worst place to keep seed corn.

THE GOOD SEED

By E. R. MEACHAM

GOOD seeds are the first and easiest step toward good crops. It takes no more land, labor, fertility, or rainfall to bring forth a harvest from high grade, selected, tested seed than from the weakest, weediest, most disease infected stuff.

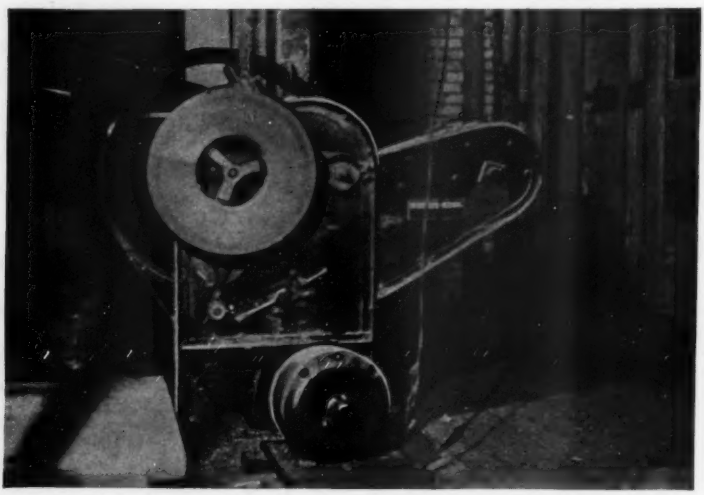
In recent years we have made great advances in perfecting better and more productive varieties of grains to meet all sorts of requirements of soil and climate. We have learned how to select the best of the crop for seed. We have developed improved methods of handling and storing the seed to preserve its quality. We have simplified the process of testing its ability to grow. We have discovered new treatments to combat seed borne plant diseases. And now the use of electricity makes the drying, cleaning, grading, and testing easier, cheaper and more convenient. Thousands of farmers find it a great help in taking that first long sure step toward a better harvest.

The other day I called on R. W. Krueger, at Cecil, Wisconsin, who raises and fire-cures certified seed corn to sell locally and to established seedsman.

When his business outgrew the capacity of the attic and the kitchen stove, Mr. Krueger made his present simple, but excellent arrangements for handling his seed crop.

"I already had this old granary," said he, "so I just dug a cellar under it and put in this regular hot-air furnace. You see it has a rather big jacket so I can circulate a lot of air around it.

"This fan supplies the air," he continued, in-



This is the outfit that shells and elevates Mr. Krueger's seed. The drying bins are at the right.

dicating a ventilating blower set behind the furnace with its discharge connected to the bottom of the jacket. "It has two intakes. We can use some air from outdoors and recirculate a lot that has already been heated."

"How much power does it take?" I inquired.

"Five Horse Power," he replied. "We began with a 2 horse motor, but we had to run the fan slow and even then it was overloaded. I think this 5 horse motor gives us about 6,000 cu. ft. of air a minute. Electric power is mighty handy for this job."

Construction of Drying Bins

"On the first floor of the building there is a series of eight drying bins. They are arranged in two rows of four bins each, back to back with a space of about 20 inches between the rows. About three feet from the floor this space behind the bins is divided by a tight partition lengthwise into two tunnels, or big air ducts, one above the other. In the back wall of each bin there is a wide opening at the top and another at the bottom to connect all the bins with the air ducts. Otherwise the bins, which are about 4 ft. square by 8 ft. deep, are snugly built of wall board and have panels that close the doorways practically air tight. In the bottom of each bin, however, set just above the lower opening, there is a false bottom of slats on which the corn rests.

"If the seed corn is to be certified," explained Mr. Krueger, "the corn must be inspected in the field or in the drying house, or both, by a man from the State Department of Agriculture."

"What does he look for?" I asked.

"He wants to know that the crop is free from disease, true to type, and reasonably productive with few barren stalks and no mixture of other varieties. The inspector also wants to be sure that the seed is properly cured under favorable conditions."

When the crop is mature, seed corn should be selected in the field. There is not the slightest chance to judge the value of the seed by the quality of the parent plant if the ears are selected from the wagons at husking time or later from the crib. But in the field it is possible to choose seed that will carry on the good qualities of the plant itself. Seed should not be saved from stalks that have any undesirable features. Instead it should be picked from fine, vigorous, leafy stalks that bear the ear at convenient height and on a shank of medium length.

"I bring my corn from the field right to these drying bins," Mr. Krueger told me. "Then I build a good fire in the furnace and start the 5 H.P. motor on the fan. That drives warm air through this lower air duct between the rows of bins, in through those openings at the bottom, up through the slatted bottoms and on up through the corn to escape through the upper openings into the upper duct. As I told you downstairs some of that air escapes carrying moisture with it and some is mixed with the incoming fresh air to help warm it."

"That gives the corn at the bottom where the warm air enters much the best chance to dry," I observed.

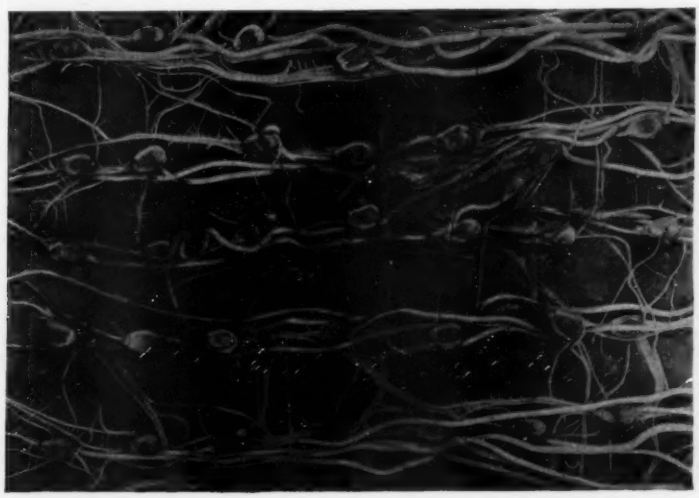
"Oh, that's easy to remedy," he replied. "We just change a few doors in the air ducts and then the warm air enters the bins at the top and passes down through the corn and out the bottom. By reversing a few times we get uniform results. The drying goes on for three or four days, depending on the weather and the condition of the corn."

Would Locate Sheller Beneath Bins

On the same floor with the drying bins stands Mr. Krueger's sheller.

"But if I were building a curing house from the start," he explained, I'd put the sheller down stairs so I could dump the corn from the bins into a hopper for the sheller. Now I have to carry the ear corn up stairs to get it above the sheller."

Anyway, that is all the labor he puts on it. On the floor under the sheller stands the ¾ H.P. motor that drives it. From the sheller the cobs go down a chute to the cellar to be used as fuel for drying the next batch. The sheller is also equipped with an elevator driven by the same motor. That takes the shelled corn up to the second floor where



By this test the three samples through the center are found to be diseased. They would surely cause losses in the field.

the spout of the elevator empties right into the corn grader.

In the grader the thick irregular butt kernels fail to pass the first screen. That gets rid of them. Then all the undersized kernels, especially from the tips of the ears, sift through the second screen, leaving only the corn of uniform size and shape. Of course there is no mixture or other grains or weed seeds in corn, but grading makes possible more accurate planting that results in a better stand and a better yield.

"This little motor completes the job," said Mr. Krueger, indicating a ¼ H.P. motor on a bracket right on the side of the grader. "It can easily separate the corn as fast as the elevator delivers it from the sheller. The good seeds and the waste drop down through these two chutes into sacks on the first floor. With the help of the motor on the sheller and elevator and this one on the grader, one man can shell, grade, and sack one batch while he tends the fire and watches the air flow and temperature for drying the next one."

"How much do you dry at a time?" I asked.

"When all eight bins are full, they turn out about 160 bushels of graded seed. This year we dried about 600 bushels. We have sent in our samples for the official moisture and germination tests and here are the reports," he added, handing me the cards.

They showed that Mr. Krueger's corn was dry enough to keep perfectly and that 98% of it grew.

An Entirely Different Problem

The grasses and small grains present a somewhat different problem of obtaining good seed. They almost always contain trash, dirt, immature or damaged seeds, and worst of all, weed seeds.

The trash, dirt, and bits of straw would do no harm to the next crop, but they do interfere with the accuracy of the grain drill by choking or partly clogging some of the holes. That results in a poor stand. The immature seeds do even more harm. It is impossible to get uniform growth and ripening from a mixture of fully ripe and partly green seed. You must harvert the crop before some plants are ready or lose grain from those that are too ripe.

But the weeds are a genuine plague. As we continue to sow new crops and additional varieties of weeds with the grain year after year, the struggle with weeds becomes more intense and more costly. It now costs half a million dollars every year just to thresh the weed seeds contained in our wheat crop. Then there is another four-fifths of a million in freight charges for hauling the weed seeds to market with the wheat. In all the grain crops weeds cut down the yield probably 10% without reducing the labor, twine, or other expenses. And when we have it harvested, weedy grain does not keep as well because the weed seeds usually contain too much moisture.

Eliminate Weed Seeds

All of the losses that result from dirty, weedy seed grain can be avoided with a fanning mill. On the same fields and under the same conditions yields can be increased very profitably. For six years the Guelph, Ontario, Experiment Station recorded the yields from large grain kernels as compared with small ones of the same variety. They found that the big seeds gave an average yield of 6.8 bushels more than the little ones. At the same time, they tested the difference between nice plump seed and shrunken grain and got 7.8 bushels an acre more for the plump grain. They also compared sound seeds with broken seeds and of course this gave the greatest difference of all, 35.6 bushels.

A good farm fanning mill, carefully run, will not only take out most of the weed seeds but also the broken grain, the undersized kernels, and the light shrunken stuff. On 40 acres of oats an increased yield equal to the smallest difference the Canadians found would, even at present low prices for grain, pay for the best fanning mill on the market.

A quarter horse power motor mounted on brackets right on the side of the fanning mill will do more than replace one man. It will drive the mill faster than a man can do for very long, and,

Only the best is sown on this farm. The motor takes care of that.

because it runs more steadily, it will turn out better and more uniform work. Besides it is big enough to handle a sacker at the same time. That cuts down grain cleaning from a long hard task for two men to an easy one-man job that can be done on stormy days throughout the winter.

And the operating cost is small. One or two kilowatt hours will furnish the power to clean, grade, and sack 100 bushels.

We are apt to feel that the grain we have raised ourselves or have admired in a neighbor's field is good enough to sow as it is. But such is not the case. Even in Wisconsin, which is famous as a source of good seed, and where 95% of the barley and 80% of the corn grown are pure bred varieties, a survey showed a startling condition.

Weed Seeds Always Present

In 48 communities, the state collected seed grain from the drill boxes just as the farmers were sowing it. In all, there were 1,157 samples and 27% of them contained noxious weed seeds. In 264 cases or 23%, the seed was so weedy that it would have been condemned if offered for sale. Besides that, 328 of the samples gave germination tests of less than 90%.

My father used to test his seed corn by actually planting 50 or 100 kernels of it in some sheltered spot just before regular corn planting time. Then when the oak leaf was as big as a squirrel's ear and he was ready to plant, he would examine the sample. If all, or nearly all, of the kernels had sprouted, that was fine. But if they hadn't, Father just shrugged and said:

"Well, the ground was pretty cold. It's getting warmer every day now. I'll plant her a little heavy and I guess enough will grow."

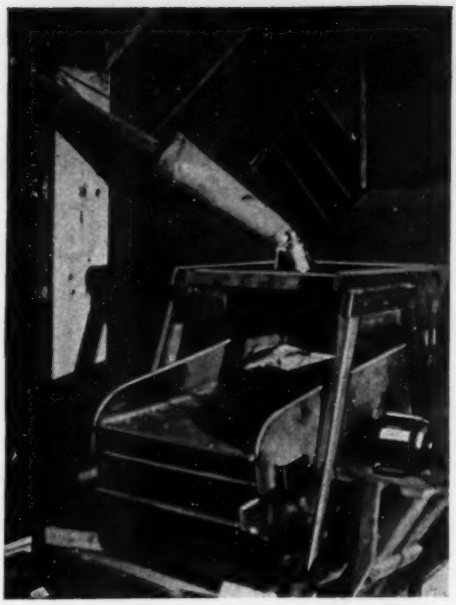
Within reasonable limits he was right. The main crop did have a better chance than the sample planted earlier.

By making the conditions of the germination test somewhat severe we can weed out the weak-links and actually inmprove our varieties. The origin of Cold Resistant Golden Glow corn that Mr. Kreuger raises illustrates this point. To push back the northern limits of the corn belt and include a region where the weather is still pretty cold at corn planting time, the agronomists at the University of Wisconsin developed this strain.

A Strange Germination Test

Back in 1914 they selected a large number of fine ears of standard Golden Glow which had itself been developed for Wisconsin conditions. From each ear they took six kernels and gave them about the strangest germination test ever run. They put those samples in an ice box and kept the temperature at 42 degrees to 45 degrees. Some of the kernels grew in spite of the cold. The ears from which they came were kept for further breeding. Six years were spent in careful selection to perfect this cold resistant corn that will grow in soil several degrees colder than that required for the parent stock. This adapts it for early planting to offset the short growing season of northern latitudes.

Many seeds that will show some life in a germinator are absolutely worthless for planting. Hard seeds such as clover, alfalfa, and sweet clover that have been scarified may be mechanically injured so that half of them will sprout but not actually grow in the field. In the case of corn, several of the most serious diseases that are hard to detect in the ears or the shelled kernels will show up in the germinator.



Mr. Kruger's elevator discharges right into the grader driven by the motor at the right.

Wait for Definite Results

Only last month *The Country Gentleman* quoted Mr. Edgar Brown, head of the U. S. D. A. Seed Laboratory, as saying: "Don't be in too much of a hurry in reading your tests. Wait to see if the seedlings make strong sprouts. If you have got bad seed it will go bad in the germinator if you will wait for a few days."

If the test of corn is made on five or six kernels from each ear, the ears from which any dead, weak or diseased kernels came can be thrown out. Only the ears whose kernels *all* produced bright, vigorous seedlings should be saved for planting. Only about 15 defective ears mixed through the seed may cause missing hills equal to a whole acre.

It is very easy as well as mightly profitable to detect and discard them. Electric germinators, small enough for one farm and large enough for the whole community, have been well described in ELECTRICTITY ON THE FARM for the past four or five years. Convenient ready-made ones are also on the market. The teacher of agriculture at the high school, county agent, or the power company can supply you with details about them.

The important thing is to appreciate how valuable clean, healthy, tested seeds are, to realize how much electric heat and power can help in selecting them, and to resolve never to plant any other kind.

Keeping THE MILK PAIL Clean

BY G. L. MUNROE

Wherever the wires go, water can be kept actually boiling hot.

IN this age and generation, we must use every precaution possible to maintain the high quality of dairy products. Clean cows, clean surroundings and efficient milk cooling methods, all contribute to the cause of sanitation. Sterilizing equipment as a means of keeping down the bacteria is fast becoming a recognized necessity. Large milk dealers throughout the country have found from careful study that in the milk pail lies the source of many high bacteria counts.

One of the cheaper and more efficient agents in fighting bacteria is boiling water. There is a vast difference, however, between the germ killing virtues of water at a temperature of 212° F (boiling) and just plain hot water. Unless the water vessel used for sterilizing can be heated while it is actually in use the chances are that the water will not be hot enough to kill the bacteria.

An electrically heated sterilizer can effectively meet the requirements. Its successful and economical operation depends upon two very important factors. First: The task must be accomplished quickly and cheaply. Second: The first cost of the sterilizer must be reasonable and it must be constructed to give years of satisfactory service.

Such sterilizers are now on the market and show every indication of filling these requirements. In tests of actual use on a dairy farm, the operating cost of one small unit, recently developed, was less than three dollars per month, sterilizing four milk pails and other equipment twice daily.

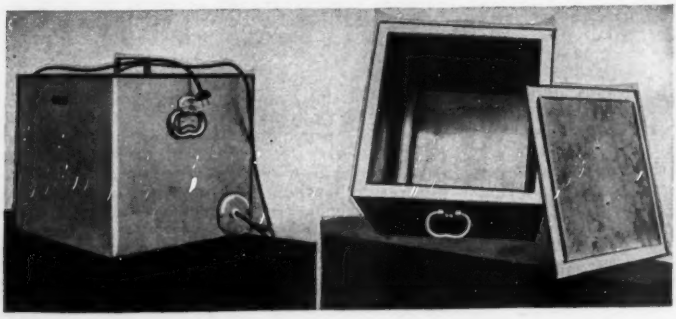
This electric sterilizer has a copper tank with about one inch of insulation inclosed in an outside casing of heavy gauge galvanized iron, and fitted with an insulated cover. The heating element is constructed to give long service and is rigidly fastened but can easily be removed from the tank. It is just large enough to hold one standard sized milk pail at a time.

Electric sterilizers in the dairy barn will not only effectively do what is required of them but have several distinctive advantages besides. The elimination of the fire hazard found in open flame types of heaters can well be given serious consideration. Being insulated, the electric sterilizer retains the heat that otherwise would radiate into the dairy room thus doing away with another objection during hot weather.

Like refrigeration, water pumping and electric milking machines, the milk pail sterilizer can well take its place among essential equipment necessary on a profitable dairy farm.

Speaking of milking machines, the electric sterilizer is just the place to wash and sterilize those milking machine rubbers.

(*Editor's Note*: A controlled steam type of sterilizer, of larger size than the unit here, is finding wide and satisfactory use on dairy farms. A description of it appears in the August, 1933, issue of ELECTRICITY ON THE FARM.)



Left: How the sterilizer looks when ready to plug in.

Right: The heating element in the corner leaves more room for the pail.

PROFIT FROM POWER on a Georgia Farm

By PHILIP WARREN

Beans at six weeks under irrigation. This one row, 550 feet long, produced an average of one hundred bushels a week for five weeks.

"NO doctor in his right mind would think of building or operating a hospital without electrical appliances," says Dr. M. F. Haygood, Superintendent of the Georgia State Tuberculosis Sanitorium, "and by the same token no farmer who hopes to make a profit from his farm in this highly competitive age can afford to do without the many valuable aids to farming made possible by the use of electricity."

Doctor Haygood's opinion is worth something, for he is not only a good doctor, but also a good farmer. Three years ago, when he became superintendent, he took over the operation of a hundred-acre farm owned by the Sanitorium. At that time the farm was producing practically nothing. In 1932 it paid a profit of nearly ten thousand dollars, and in 1933 Dr. Haygood expects to show a profit of more than twelve thousand dollars. Electricity, he declares, has played a very important part in his success as a farmer.

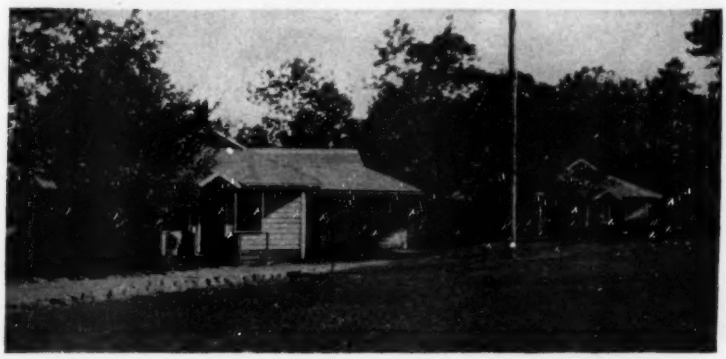
Electrical Equipment Installed

"When I took charge of the State Tuberculosis Sanitorium in August, 1930," Dr. Haygood continues, "the farm was very much of a liability. One of the first things I had to decide was whether we would continue to operate the farm, or abandon it altogether. We couldn't sell it, and it seemed such a shame to abandon a farm when we were paying out nearly forty thousand dollars a year for food supplies, most of which were farm products, that I determined to try to make our farm pay.

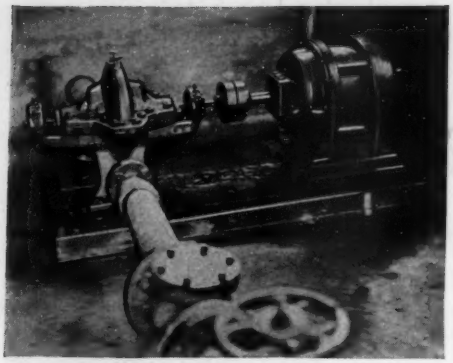
"Since we already had a few milk cows, we started our farm operations by building up our dairy herd. We bought a few more cows, installed electric milking machines, electrically operated pasteurizer, sterilizer, cooler, bottle washer, bottler and sealer, and a feed grinding mill with a twenty-five horse power electric motor and starter. In a few months' time we were producing an adequate supply of Grade "A" pasteurized milk, delivered to our kitchens in sealed, sterile bottles at a cost of 16 cents a gallon, whereas the contract price at which we had been buying milk was 38 and 42 cents a gallon.

"As soon as we had made a start with our dairy department, we established a poultry department, bought electric brooders, an electric incubator, a motor driven grinder and mixer for our chicken feed, and installed electric heating and cooling equipment in our brooder houses.

"With the aid of these machines the same man-



Two of the electrically equipped employees' cottages on the farm.



The fifteen horsepower motor and centrifugal pump which supplies water to four and one-half acres.

power we had formerly employed in handling less than a dozen cows, and raising less than a hundred tons of feed a year, could take care of three times as many cows and a poultry flock of 4,000 to 5,000 birds.

"Of course we put in a complete electric lighting system for the farm buildings and the farm yard.

"In 1931, the first year we operated our farm with the aid of modern electric machinery, we showed a profit of nearly two thousand dollars from the dairy and poultry departments alone.

Having brought our dairy and poultry departments up to the point where we were really getting something out of them, we next turned our attention to vegetables. We were feeding from four hundred to four hundred and fifty people three times a day, and it takes a lot of vegetables for our table. We were buying these vegetables in the open market, and they were costing a lot of money. I was convinced that by applying modern methods to the raising of vegetables, using electricity wherever possible, we could produce what we needed cheaper than we could buy them.

"The first thing we did was to build an electric hot-bed. Earnest Carrington, the local manager of the Georgia Power Company, helped us with this and with other power problems which came up from time to time. Our hot-bed is a concrete box, 24 by 6 feet, 2 feet deep, with a lead cable laid in loops a few inches below the surface of the soil in the box. There are two thermostats by which the temperature controls the current input, enabling us to keep the soil in the box at any desired temperature.

"We found that if we kept the soil from ten to twenty degrees warmer than the atmosphere, the seeds would germinate much faster, and the plants would be much healthier than when we depended solely upon sunlight for heat. And also, we got a start of from four to six weeks ahead of the normal growing season in our section of North Georgia. That hot-bed cost us twenty dollars, and we wouldn't take two thousand dollars for it, if we could not duplicate it.

"But with the rapid germination and strong growth obtained by using the hot-bed, we found that our plants needed much more water than nature supplied by rain. This called for an irrigation system of some kind.

"So, again calling in Mr. Carrington for technical advice, we decided on an overhead system. To provide a pond for our water supply, Mr. Carrington designed and built for us a small dam across a little stream running through the farm. He installed a centrifugal pump driven by a 15 H. P. motor and delivering 160 gallons of water per minute at a pressure of about fifty pounds to the square inch. We laid four hundred feet of underground feed pipe, thirty-six hundred feet of overhead pipe, with thirteen hundred nozzles to water four and a half acres of land.

Results of Irrigation Surprising

"The results have been really amazing! The first crop set out, six rows of tomatoes 550 feet long, 12 feet wide, from plants started in our electric hot-bed, produced enough tomatoes in the first six weeks to have more than paid the whole $1,500 the system cost us, if we had sold them in the wholesale market at current prices.

"Although the irrigation system has been in operation only three months, we have had a great abundance of fresh vegetables of several kinds for our table, and have canned more than a thousand gallons of vegetables for use in the winter. Our garden superintendent now has a planting schedule which calls for eighty-four varieties of vegetables which will be grown during the whole twelve months of the year. The water will enable us to keep frost bite off of our growing crops, and we

(*Continued on page* 18)

The hotbed was the first step taken to electrify the sanitorium farm. The framework is constructed of concrete and is 24 x 6 feet. Two thermostats control the temperature of this hotbed.

Celery grown in heated soil is shown at Mr. Sweet's right. The 10-inch boards reduce heat radiation as well as serve for blanching purposes.

Celery GETS AN EARLY START

BY LAWRENCE E. GOBLE

MR. GEORGE A. SWEET, President National Vegetable Growers Ass'n., and President Indiana Vegetable Growers Ass'n., and a large grower of celery, carried out last season an experiment on his farms in an attempt to produce early celery by the aid of electric heat. The price differential on early and late celery is as great as it was on winter and summer eggs in 1915 and 1920.

There are two main southern celery belts in the United States. The winter celery on the local market is shipped into Fort Wayne vicinity from California. The Florida celery appears in February and continues until the last of May. In June the mid-west must depend upon California, with high transportation cost, for supply until local celery is ready to market. Fort Wayne, near which Mr. Sweet has his farm, is located in the southern edge of the northern celery belt.

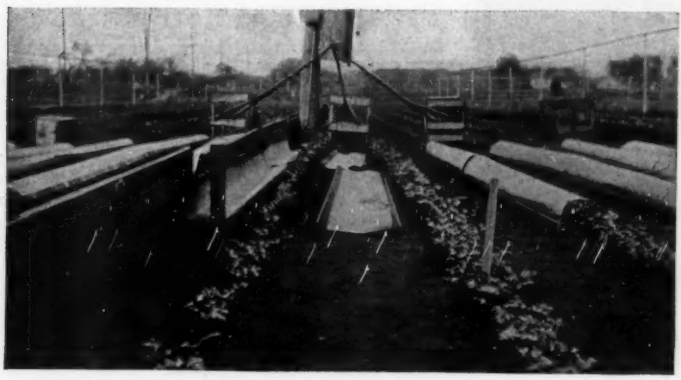
By producing celery two to three weeks earlier than normal, the grower can take advantage of a price several times as high as that produced later. The local power company co-operated with Mr. Sweet in this test to determine whether the cost of operation would be justified by the increased production from a monetary value standpoint.

The celery on which the experiment was made was planted on the Sweet Farm on April 19th and the current for the soil heating cable was turned on the following day.

The standard No. 19 soil heating cable was used. The cable was laid in the rows at a depth of 2 to 3 inches before the celery was planted. Plot No. 1 included four rows each 50 feet long of 9.68 watts per foot. Plot No. 2 was 4 rows 60 feet long of 6.68 watts per foot. Two rows of plot No. 3 of 75 feet each were next with 4.31 watts per foot. Then there were three check rows with no heat followed by the other two rows of plot No. 3. Plot No. 4 consisted of 4 rows 50 feet long with 2.42 watts per foot.

On plot No. 1 a thermostat was installed and set at 60° F. on April 28th. Before the installation of thermostat the average daily consumption on this 200 foot plot for 14 hours was 29 K.W.H.; for the balance of the season with thermostat operating 24 hours per day the daily average was 7.08 K.W.H.

On plot No. 2 a thermostat was installed on May 6th. Average daily consumption before that date was 24.7 K.W.H. The average for balance of season for 24 hours' operation was 5.2 K.W.H. On May 16th a thermostat was installed on plot



The check or unheated row of celery is at the left, while the heated row is at the right.

No. 3. Average daily consumption before was 17.6 K.W.H.; balance of season average 5.28 K.W.H. Plot No. 4 finished the season without thermostat with a daily average of 7 K.W.H.

The first sixteen feet of each row was covered with celoglass about 18 inches wide formed into an arch with ½-inch x 1½-inch wood strips on each edge for support. The plants under the celoglass covers remained green throughout the season. Even the outside leaves did not slough off. In appearance it showed up better than the uncovered sections.

On June 14th a part of plot No. 1, No. 3 and check row was harvested.

Plot No. 1 under celoglass produced $.0797 value per lineal foot.
Plot No. 1 no celoglass produced $.0632 value per lineal foot.
Plot No. 3 under celoglass produced $.083 value per lineal foot.
Plot No. 3 no celoglass produced $.070 value per lineal foot.
Check plot produced $.063 value per lineal foot.

The greatest gain at this stage of development was shown on plot No. 3 under celoglass. This showed an increase of 56.6% over the check row.

Although no plot showed a profit on the electricity purchased, Mr. Sweet is convinced that the application can be made a profitable one. Some of his conclusions, based on this year's experiment are as follows:

1. Thermostats are as necessary in soil heating as in electric refrigeration. Above figures indicate that with thermostats in service from the beginning of the season *all four plots* would have shown a *profit* last season.

2. He could have planted his heated plots two weeks earlier than he did.

3. He could have used potted plants at a profit.

4. By planting rows closer together and placing 10-inch boards upright every second row much heat radiation losses may be eliminated. These boards are used for blanching later so there is little added expense.

5. With the exception of the cost of heat, early celery requires less expense for irrigation, insecticides, etc., than late celery.

6. Another crop may be harvested from the same ground as the heated celery will be harvested by the middle of June.

7. Celoglass covers, without heat, increase production. Heat without celoglass covers shows greater increase. A combination of the two seem at this stage to be solution.

8. Wattage should be high enough to take care of periodical temperature drops. It seems that plot No. 2 with 6.66 watts per foot is ample in this territory.

Mr. Sweet considers the results sufficiently favorable to justify continuation this year on a much more extensive scale. Plans are now in the making for the use of about twenty-thousand feet of cable on the Sweet Farms.

Small Motor Starts Another Task

R. R. PARKS

SEVERAL ¼-H.P. motors are being salvaged from washing machine "trade-ins" by one middle-west power company. The picture shows the use to which these motors are being put. The motor, a tool grinder, and a small grain grinder are all mounted on 1-inch board so that the complete outfit is portable to the job.

A quarter H. P. motor furnishes the driving power for this portable tool and feed grinding outfit.

The motor is mounted on a sliding wood base between two wood guide rails. It is clamped in place by two wing nuts, the bolts of which fit slots cut in the motor mounting. The motor is easily moved to adjust the belt tension.

A power tool grinder, costing $5.95 and equipped for grinding mower sickles, disks, and other farm tools, is mounted on one end of the board. A 4-inch V-type pulley and 34-inch V-belt, costing 35c and 50c respectively, drive this grinder at approximately 2600 revolutions a minute. The speed is very satisfactory and there is ample power for grinding most farm tools, provided the wheels are kept sharp. A wheel dresser costing 70c will help do this.

A 4½-inch buhr mill, costing $6.25 and equipped with its 10-inch flat pulley is mounted on the other end of the board. With a 1¾-inch V-type pulley and 58-inch V-belt, costing 25c and $1 respectively, the motor drives the mill at approximately 250 revolutions a minute for grinding shelled corn. At this speed the mill grinds 150 to 200 pounds an hour, depending on fineness, for a half kilowatt-hour of electricity. It grinds wheat at approximately the same rate when the 1¾-inch pulley on the motor is replaced by the 4-inch pulley used for the tool grinder.

ON THE AIR

Conducted by James J. Hervey

Accident Started Atwell as Comedian

WHEN you hear Roy Atwell flounder through the English language on the radio, consider the fact that this comedian once came to the stage to show how a really serious actor should act.

He obtained a part in the kind of a show in which this line appeared: "It is spring and the little birds are twittering in the tree tops." That's how the line read in the script, but when Atwell said it, it went like this: "'Tis ting and the twits are birdering in the tree flops."

The applause in the house was deafening, and Atwell's anguish was almost unbearable during the rest of the performance. But after the show the manager came to him and asked him to give the same line in the next day's performance.

So earnest young Atwell took the laughter in the theatre for the handwriting on the wall and became a comedian.

• • •

Distinctive Music by Waring

ANOTHER favorite program that is carried weekly over CBS stations is a half hour by Fred Waring, his orchestra, and other entertainers.

Although the band is strictly popular in its style, the quality of the music in these broadcasts is unusually excellent.

Waring, by the way, is one of the most experienced band leaders in radio. For many years he has played delightful music especially pleasing to younger people.

• • •

Hall Has Many Namesakes

"MISTER, is your name Wendall Hall?"

The speaker, a small boy, was delivering a parcel to the home of the well known "Red Headed Music Maker."

The singer replied that he was Wendall Hall.

"That's funny, that's my name, too—I mean my first two names," exclaimed the youngster. "I was named after a radio star named Wendall Hall. Ever hear of him?"

"I should say I have," answered Wendall, "I must be the man you were named after, son."

And the boy shoved the package into Hall's arms and dashed away. The entertainer hasn't been able to locate the boy since that time.

But he does know where there are plenty of other "Wendall Halls," for many write to him frequently, and, all told, he has more than 100 namesakes throughout America, children who have been named after the popular radio star during the last ten years.

Besides all these, Hall has a Wendall Hall Jr., of his own.

Doris Clark of Wisconsin and Hugo Graumann of Oklahoma, the latest winners of the Moses trophy awarded for outstanding leadership among the 4-H clubs of the nation. Immediately following the announcement of the awards they went on the air to tell the 900,000 4-H'ers of the country the story of their club experiences.

Low Prices **BELL FEED GRINDERS** High Quality

Especially designed for Operation by Electric Motor 1/6 to 25 H.P.

Real MONEY SAVERS for the FARMER— POULTRYMAN — DAIRYMAN and HOME

Will Grind all Grains that are profitable to grind.

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THE C. S. BELL COMPANY

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Manufacturers of Feed and Food Grinders since 1858.

ELECTRICAL HOUSEKEEPING

Conducted by
GAIL MEREDITH

Making GOOD WASHERS Better

IF you are buying a new washing machine this year, you have a grand lot to choose from, for manufacturers seem to be outdoing themselves in making good washers better.

In the show rooms of your power company, you will find machines that have quality, convenience and service built into them. They are good looking, safe and quieter in operation than ever before. The gears on most all machines are entirely enclosed and run quietly in a constant bath of oil. Having the tub set in a rubber pad, or the motor resting on a cushion of rubber or else suspended by springs on a wooden board plays the double part of cutting down vibration,—and that is noise—and insulating the motor from the metal of the machine.

Even the covers have a soft rubber band around the edge. This keeps them from rattling against the top, but more than that it keeps the water from spilling out, and helps keep the water hot longer.

The cords are all rubber, water proof, and have unbreakable soft rubber attachment plugs molded onto the end.

The new washers demand less work on your part, and do more for you. The tubs, aluminum or one piece porcelain enamel for the most part, are smooth and non-porous so they clean easily and will neither rust nor hold the smell of wash water and soapy clothes.

If you haven't a floor drain in your basement, or if you are going to wash in the kitchen, you will be glad to see that there are pumps on many of the best washers. Carrying water to the tub or carrying it away again should be as unnecessary as a wash board. A length of hose from the faucet will fill it, and a pump on the washer itself will send the water out through a hose with a curved nozzle that hooks over the edge of your sink, and empty the washer in a couple of minutes without your lifting a hand.

The new wringers have soft rubber rolls that are easy on buttons. They have well built frames,

This washer has a square tub of blue porcelain enamel. It washes the clothes by means of a central paddle called the activator. There is a pump that forces the water from the tub to the sink. The controls are grouped together on one panel.

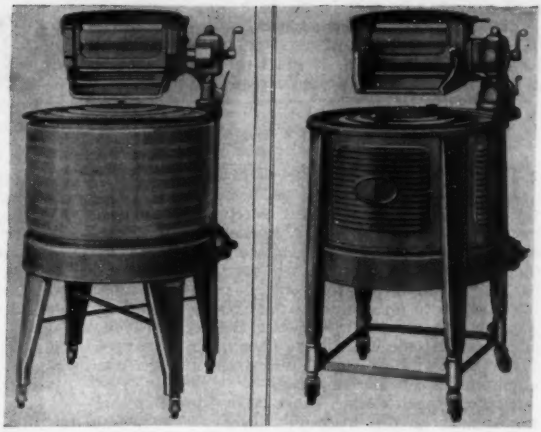
The washer with the hydraulic dryer. There is a heavy, soft rubber bag in the right hand tub. There is a very convenient grouping of the controls.

some of them entirely porcelain, some rust proofed metal and all fitted with improved safety releases that act quickly at the merest touch. On some of the machines the drain board reverses automatically so you cannot forget it and spill water onto the floor instead of into the tub.

The controls on most of the new washers have been simplified. There are fewer of them and they have been placed so you can reach them easily and work them without effort. On some machines the motor starts when you plug in the cord. Others have the motor switch on the rim of the tub; one on the top of the center post; some grouped with the other controls on a single panel.

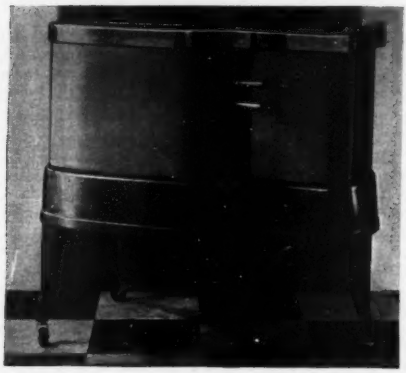
Engineers have been giving a good deal of thought to the washing action inside these tubs, to make it thorough, yet gentle enough to wash your most delicate garments safely. Some washers have two speeds, a slow one for silks and woolens, a faster for heavier things. But others depend on the action of the paddle contrivance that churns the clothes about in the now popular gyrator machine to take care of this, and to vary the pull on the clothes and the force of the water action in different parts of the tub. This central paddle bears various names in different washers and it has different shapes, but whatever it is called, and however it is designed, it has been fashioned of smooth materials that will neither pit nor corrode so they cannot snag nor stain your clothes.

You will find that there are many washers that have no wringers attached. They have instead an extra tub which holds an inner basket, cone shaped or cylindrical as the case may be. The inner surface of these baskets is satin smooth aluminum or porcelain enamel. The clothes are put into them from the wash water and whirled around so the water flies out through small holes in a ring at the top of the basket or in the sides. There is no squeezing, or twisting or pulling. The



Left: There are different corrugations on this tub. The agitator on these two machines has a double set of perforated fins.

Right: This machine has corrugated wash board panels in the side of the enamel tub. Finger tip controls on the wringer and at each side of wringer post on the tub are convenient and easy to operate.



A double tub washer that washes the clothes in one, and spins them damp dry in the other. The motor switch and the levers to run the activator and spin the dryer are mounted close together.

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LOOK BETTER
FEEL BETTER
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Use a Stewart Clipper. It quickly pays for itself by helping to keep your work stock fit. Clipping saves half the grooming time. Send for complete illustrated Stewart catalog of clipping and shearing machines. Made and guaranteed by Chicago Flexible Shaft Company, 5524 Roosevelt Road, Chicago, U.S.A. 44 Years Making Quality Products.
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Boils Faster—
No Current Wasted
Mrs. A. J. Kachik says: "I have one Chromalox unit installed on my range . . . I find everything comes to a boil in much less time. There is no electricity wasted so that means a saving in our light bill."
Try Chromalox Free on your own range without obligation.
Ask your Power Company for details or write to EDWIN L. WIEGAND CO., 7580 Thomas Blvd., Pittsburgh, Pa., Manufacturers Chromalox Electric Heating Units.

clothes simply lie still in the basket as it spins.

You can see what an advantage the dryer will have for blankets, comforters, or feather pillows. If you like, you can even whirl the lighter things a little longer and have them ready to iron.

Another Type Dryer

There is still another type of dryer on another new model of an old line of washers. It works by water pressure. There is a second tub on this machine quite like the spinners, but instead of an inner basket, it has a large, soft rubber bag. When the clothes have been washed and placed in this bag, a turn of one of the control levers lets water into the tub to press against the outside of the bag, pushing the clothes up against the locked cover and crowding the water out. This water is pumped through a swinging spout either back into the machine or into stationary tubs.

You can rinse clothes in the second tub or either the spinner or this hydraulic dryer.

So if you are buying a washer this year, you will find many details to approve in the new machines. Any of them will wash your clothes clean, so the type you buy and the make you buy is largely a matter of personal preference. But whatever it is, you will be wise to buy from a firm you know and have confidence in, a firm you can rely on to give you any service you may need for the machine and to give it to you when you need it.

• • •

Chronicles of a Cook

THE other day a friend of mine told me that she had found the perfect recipe for salmon souffle.

"It is easy to fix, and I don't have to hold my breath till I get it on the table, and it tastes better and better every time I make it."

If you want a new way to put salmon onto the dinner table, you may like it too.

2 tbsp. flour	1 cup flaked salmon
1 tsp. salt	3 eggs, separated
1 cup milk	1 tbsp. butter

Make a smooth paste of the flour, salt and a little of the milk. Add to rest of milk and bring to a boil, stirring constantly. Add the salmon and then pour the mixture over the beaten egg yolks and butter. Cool. Fold in the stiffly beaten egg whites. Bake in a greased baking dish set in a pan of water for 45 or 50 minutes at 325 degrees.

Then here is a cheese fondue that we have for supper quite often.

1 cup milk	1 cup grated cheese
1 cup bread, cut in pieces	1 tablespoon butter
3 eggs, separated	½ tsp. salt

Heat the milk, add bread, butter, well-beaten yolks, cheese, and salt. Cook slowly until the mixture thickens. Cool. Fold in stiffly beaten egg whites and pour into a greased baking dish. Bake in a 375 degree oven, setting the dish in a pan of hot water. Bake for about 40 minutes. It is done when a knife inserted in the mixtures comes out clean.

Mike: "I haven't seen my Uncle Pat for ten years. Tell me what he's been doing all the time."
Ike: "Ten years."—Annapolis Log.

Questions and Answers

Conducted by H. J. GALLAGHER

Question: *I have a 76 watt transformer that delivers voltages from 2½ to 27½ volts. How can I charge a storage battery with the transformer?*

Answer: The transformer changes the voltage on alternating current, but does not change A. C. to D. C. and a battery can only be charged with direct current.

Question: *How may we proceed correctly to utilize an A. C. high power 110 volt current to start a Fordson tractor. We are successful in starting it off of the magneto of a Ford Model T touring car, but failed when trying to use a tri volt (6-12-18) transformer off of the high power line. Why?*

S. E. WEAVER, Goshen, Indiana.

Answer: The ordinary 6-12-18 volt transformer does not have sufficient capacity to furnish a hot enough spark. A heavy duty six volt transformer of 60 watt capacity in combination with a jump spark coil may be used as an ignition system for a gas engine.

Question: *I have a steady 6-inch stream of water with 7 foot fall. Would that be enough power with a 7 foot over shot wheel to light a 6-room house?*

R. J. CONNELL, Brandywine Summit, Pa.

Answer: The power that may be developed from a stream is determined by multiplying the gallons of flow per minute by the available head in feet and dividing the result by 4,000. A 6-inch stream with a flow of 300 gallons per minutes, 7 foot head, would develop ½ horse power. Six hundred gallons would develop 1 horse power, and it would require a flow of 2,286 gallons per minute to develop 4 horse power.

"A stream developing 4 h.p. or more will operate a lighting plant without a storage battery by using a generator which will deliver a constant voltage with a turbine. The smaller streams which develop at least 1 h.p. will operate battery charging light plants satisfactorily. It is usually not advisable to attempt to harness a stream unless the dam can be built at least 4 feet high because a special large capacity turbine or under shot wheel would be required to develop even a small amount of power.

"After determining that a stream will develop ample power for your needs, the expense of harnessing the stream should be carefully considered; for instance, the location of the dam site should be reasonably near the buildings where the electricity will be used in order to avoid the necessity of a long transmission line. If the banks are widely separated, a very long dam will be required and a large area will be inundated, or, if the banks are very porous there will be considerable expense in building a dam which will hold back the water."*

*"Method to Tell Power Stream will Furnish," W. H. Sheldon. The Quarterly Bulletin, Michigan Agricultural Experiment Station, Michigan State College, East Lansing, Michigan.

What's New

Reviewed by T. E. HIENTON

Electric Soil Sterilizer

Eliminating losses due to plant diseases, insects and weeds is becoming increasingly important where crops are forced in greenhouses and hotbeds. Sterilization of soil, before it is used, is of great importance in eliminating the losses mentioned above and is commonly practised.

A new electrically heated sterilizer has recently been added to the list of equipment available for soil sterilization. This double-walled sterilizer is cylindrical in shape with sides, top and bottom insulated. The electric heater forms an internal cylinder, concentric with the outer one and is completely surrounded by soil. It has a capacity of 9 cubic feet, is 40 inches high with outside diameter of 27 inches. The 1150-watt heating unit is designed to operate on 220-volt current.

Electric Fencing Unit

An electric fencing unit is one of the most unusual and perhaps important articles of electric equipment which has been recently announced. The fencing unit, when installed, is connected directly to a barb wire which carries a small amount of electric current. Animals such as cattle and horses may be fenced with a single strand of wire while two strands may be required for hogs. According to the manufacturer there is no danger of injury to persons or livestock because the flow of current through the fence is reduced far below the danger point.

Current used by the fencing unit is about that of a ten-watt lamp consuming a kilowatt-hour in 100 hours. The fencing unit operates only from 110-volt alternating current. The unit itself consists of choke, coils, condensers, reducers, a static eliminator, current interrupter and other essentials enclosed in a compact, heavy metal case. It operates automatically and its operation is not affected by rain. It can be used where steel posts support the wire but a small block of wood must be used to insulate the wire from the post.

One unit, it is estimated by the manufacturer, will fence a section of land, this including line fences, lanes, pastures fenced off, a bull pen, etc.

Cold Room Brooding
Made Practicable *with the*
TRUMBULL Electric Brooder
Built on a New Principle

110 and 220 Volts A.C.

Inverted Cone and Double-Wall construction (patented) accomplish three purposes: (1) Give an even distribution of heat at all floor points. (2) Eliminate all cold drafts. (3) Reduce current consumption. Two sizes: 100 and 350 chicks.

Write for illustrated Folder and details regarding low operating cost.

THE TRUMBULL ELECTRIC MFG. CO. Dept. W-12 Plainville, Conn

A GENERAL ELECTRIC ORGANIZATION

YOUR QUESTIONS ANSWERED

WITHOUT OBLIGATION!

Now is the time to find out what help electrical equipment can be.

Many of your questions can be answered most satisfactorily by our advertisers. Read the advertisements carefully, for these manufacturers are best equipped to help you and will answer your questions without obligation.

Any information that you cannot obtain from advertisers will be supplied if you will fill out and mail the handy coupon below.

FOR WATER SUPPLY:

Automatic Water Systems (*see advt., inside front cover*)—Pump Jacks—Water Heaters.

FOR THE DAIRY:

Milking Machines—Milk Coolers—Cream Separators—Churns—Bottle Washers—Dairy Sterilizers—Clipping and Grooming Machines (*see advt., page 15*).

FOR POULTRY:

Incubators—Brooders (*see advt., page 17*)—Time Switches—Drinking Fountain Warmers (*see advt., page 17*)—Ultraviolet Light.

FOR THE HOUSEHOLD:

Ranges—Refrigerators—Clothes Washers—Vacuum Cleaners—Ironing Machines—Dishwashers—Flat Irons—Food Preparing Machines—Ice Cream Freezers—Sewing Machines—Table Appliances—Clocks—Range Replacement Units (*see advt., page 15*)—Floor Polishers.

FOR REPAIR AND MAINTENANCE:

Soldering Irons — Tool Grinders — Drills — Paint Sprayers—Woodworking Machinery—Motors.

MISCELLANEOUS:

Feed Grinders (*see advt., page 13*) — Ensilage Cutters—Corn Shellers—Hay Hoists—Feed Mixers—Stationary Spray Plants (*see advt., inside front cover*)—Burglar Alarms—Ventilators—Soil Heating Equipment—Radio Sets.

FREE INFORMATION REQUEST

Electricity on the Farm, 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying.

....

....

My name is .....

Address .....

.....

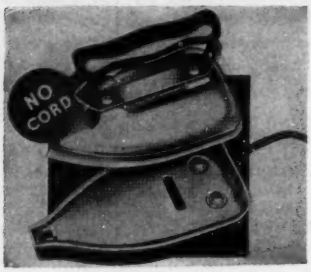
I get electricity from .....

..... 2-34

Experience of farmers who have used the fencer has shown that it is not necessary to have the fence charged at all times since animals are unaware except from contact whether the wire is carrying an electric current.

Cordless Electric Iron

A recently announced electric iron is decidedly different from others now available. The heating element for the iron is located in a special base on which the iron rests when it is not in use. Heat is automatically supplied to the iron when placed upon the base and cut off thermostatically when it has reached the desired temperature. The usual electric cord is attached only to the base. The iron is made in two sizes for domestic use, 4-pound and 6-pound.



Bell Company Changes Ownership

Col. and Mrs. L. B. Boyd, the C. S. Bell Estate, E. W. Schumacher and Blair Boyd have sold to Mr. and Mrs. Joseph M. Gaites, Charles Bell and Miss Virginia Bell controlling interest in The C. S. Bell Company of Hillsboro, Ohio, well known manufacturers of grain grinding mills, cane mills, sorgum evaporators, farm bells and other farm equipment.

The C. S. Bell Company was founded in 1858. Since its founding a controlling interest in it has been owned by the family of the founder. Charles Bell and Miss Virginia Bell, two of the present owners, are grandchildren of the founder.

Slow Trains

The conductor of a very slow English train hurried along the platform and opened the door of a compartment occupied by an elderly gentleman.

"Pardon, me, sir," he said, "but I've got some very bad news for you."

"Oh!" exclaimed the passenger. "What's happened?"

The conductor looked agitated.

"Well, sir," he said, "we've just had news through to the effect that Dishville, the stop where you were getting off, has been burnt to the ground."

"That's all right," returned the passenger; "they will have rebuilt it by the time this train gets there."

Security

A housewife employed a colored man to carry three tons of coal from the curb into the basement. A little later she discovered she had no money except a five-dollar bill. Calling the man, who was about half through with the job, she asked him if he could change the bill, so he could be paid.

"No'm," he replied, "but I c'n git it changed over at de grocery, Miss."

The woman hesitated about taking the chance.

"Don't you worry, Miss," the colored man assured her. "I'll come back wid de change. And' jes' to show you it's all right, I'll go fer it right now, an' leave dis othah ton o' coal I ain't carried in yit out in de street fo' s'curity.'

Profit From Power

(*Continued from page* 10)

will have a sufficiency of fresh growing things the year round. And the best part of it is that we will be able to produce these things much cheaper than we could buy them, which is a very important factor with an institution which must depend upon constantly decreasing state appropriations for its support.

"During the three years in which we have operated the farm, we have built several cottages for our farm employees, and all of these houses are completely electrified, including electric cooking ranges, electric hot water heaters, electric refrigerators, and of course, electric lights and radios.

Other Electrical Equipment Installed

"The profits we have made from our electrically operated farm have enabled us, during the past three years, to install a great deal of electric equipment in the hospital proper, too. We have put in electric ranges, electric fry-kettles, electric bake ovens, slicers, peelers, dishwashers, and refrigerators throughout the infirmary and the children's hospital at the institution.

"In addition to the general farm operations, we have built up a good beef herd, and a good swine herd. We were able to do this profitably, after we had installed an electric cold storage plant, in which we can keep our fresh beef, pork, and other products.

"We attribute our success at farming in a very large measure to the fact that we have used electricity intelligently, and to the fullest extent possible. Of course, we are not through putting in electrical devices, and whenever we meet some problem of production, harvesting or storage, we will naturally turn to electricity for the best solution.

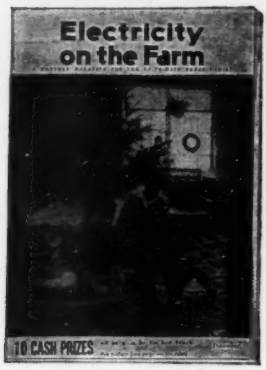
"It is my opinion that most farmers can find a profitable way to employ electricity on the farm. Take the single factor of irrigation. An overhead watering system will enable farmers in the East and South to hasten production so as to get truck crops to market when prices are high, and demand is at its peak. And it will also enable the farmer to increase the yield per acre from 100 to 300 per cent with almost any vegetable crop. Then, too, an electrically equipped poultry department will enable the farmer to have eggs when eggs are scarce and high. Steady, dependable production when prices are high and demand is brisk, is the secret of success in farming, I think."

CLASSIFIED ADVERTISING

The PARAGON POULTRY TIME SWITCH is scientifically designed and approved by state universities. It provides automatic control both morning and night and DIMS THE LIGHT AT NIGHT to allow the hens to return to roost. Low price and UNCONDITIONALLY GUARANTEED. Write for full information today. PARAGON ELECTRIC COMPANY. Van Buren and Dearborn Sts., Chicago, Ill.

ELECTRIC BROODER PARTS—Build your own Electric Brooder. We furnish parts—Thermostat Switch, Heating Element, Drawings. With our instructions, common tools and ordinary ability you can construct successful brooders at minimum cost. Write today. INTERSTATE SPECIALTY CO., North Manchester, Ind.

TITLE CONTEST AWARDS



DECEMBER COVER

RULES
FEBRUARY CONTEST

Ten cash prizes will be awarded for the 10 best titles for the picture on the front cover.

The first prize will be $20 cash and nine second prizes of $2 in cash will be awarded.

In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

Titles need not be longer than 10 words — the shorter the better — and they do not have to rhyme.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Question "A" must be answered correctly.

Send your title on the coupon below or make out a similar form on a plain sheet of paper or government post card.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 6 North Michigan Avenue, Chicago, Illinois, before March 1st.

Winning names and titles will be announced in the April issue.

Winners for December

First Prize — $20

"Mother's work—children's play—
Electrically solved on Christmas Day."

BERNICE E. LESURE, R.F.D. 3, North Adams, Mass.

Nine $2.00 Cash Prizes

"Electric gifts bring lasting cheer
At Christmas and throughout the year."

MISS JENNIE MAC WILLIAMS, 321 Oak St., St. Charles, Ill.

"Christmas time—what joy and fun
With electric gifts for everyone."

MRS. HOWARD N. SCARFF, R.F.D. 3, P.O. No. 128, New Carlisle, O.

"Christmas time—lots of fun,
Electric gifts for everyone."

MRS. R. A. ROSS, R.F.D. 3, Middletown, Md.

"Electric gifts bring lasting cheer
For Christmas morn and many a year."

CHARLES PEARL, R.F.D. 2, Yantic, Conn.

"Electric gifts for mother and boys
Bring Christmas cheer and year-round joys."

MRS. FRED WOOD, R.F.D. 7, Fort Plain, N. Y.

"Looks as though their Christmas cheer
Has been electrified this year."

MRS. L. E. McCONKEY, R.F.D. 2, Ripley, Okla.

"Electric gifts bring Christmas cheer,
And happiness throughout the year."

WILMER L. SATTERTHWAIT, Star Route, Salem, O.

"Electrical gifts bring lasting joy
For grown-ups or growing boy."

MRS. ALVIN E. HUGO, R.F.D., Ashby, Mass.

"Electrical gifts bring Christmas cheer
365 days a year."

MRS. A. L. BAUER, R.F.D. 1, Box 130, Chehalis, Wash.

My title for the February Front Cover picture of ELECTRICITY ON THE FARM is.....

.....

.....

.....

(a) What are your favorite Radio programs?.....

.....

.....

My name is..... R.F.D.....

Post Office..... County..... State..... 2-34

All's well in the night!

A NOISE in the blackness of the night . . . Eyes straining to pierce the darkness . . . "Maybe it's—" . . . with a flip of a switch a flood of light flashes on. A reassuring glance shows everything safe, all well, and you go back to restful sleep.

How often has it happened to you! The assurance of safety is one of the chief benefits which electricity brings to the modern farmer. Many people keep a small light burning in the hall all night. Some people keep lights burning outside the house and barn to keep prowlers away. The farmer knows it is cheap protection, for a 15 watt lamp used eight hours every night costs *less than a cent a day.*

Good lights at house and barn are more than a convenience. They give you protection and safety and a real assurance that all is well all night long.

For further information, write your Electric Company or

Electricity on the Farm

24 West 40th Street, New York

6 North Michigan Avenue, Chicago

b